Do resit exams promote lower investments of study time? Theory and data from a laboratory study

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Introduction

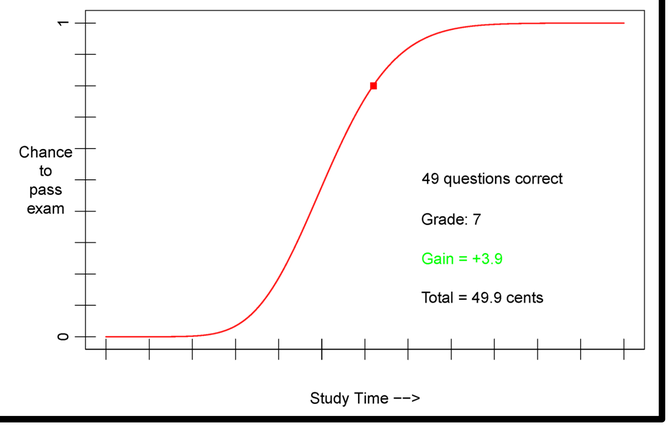
Does the prospect of having a second chance to achieve a goal influence investments on a first chance?

According to our model of investing study time on multiple choice exams, resit exams, an example of second chances, should lead rational students to invest less study time on a first exam with resit opportunity as compared to a single exam.

This behavior should be due to an optimization of the trade-off between the costs of investing time and the benefits of passing the exam.

Task

- Investment game requiring an investment of fictional study time to pass a fictional multiple-choice exam.
- Exam outcome computed by our model of study-time investment based on the invested study time.
- Investing study time costs money, passing earns money.

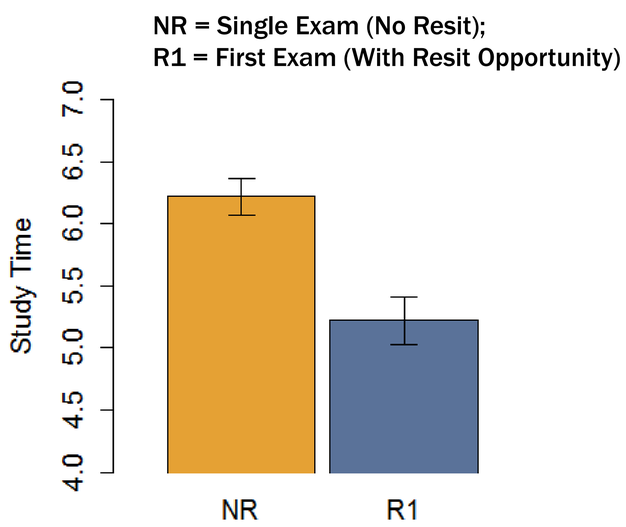


Conclusions

In accordance with the model predictions, resit exams lead to lower investments.

This second-chance effect, the lowered investment on a first exam compared to a single exam, is diminished by: 1) restricting access to the resit; 2) increasing depreciation of first exam investments (i.e. increasing forgetting of knowledge between exam opportunities).

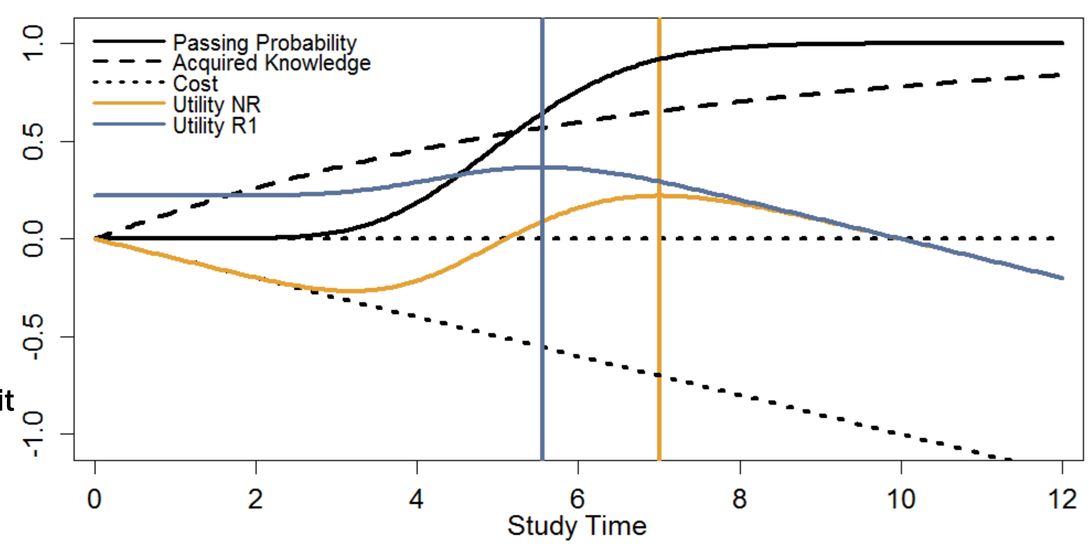
The second-chance effect seems to be a rational optimization of the trade-off between the costs of investing time and the benefits of passing the exam.

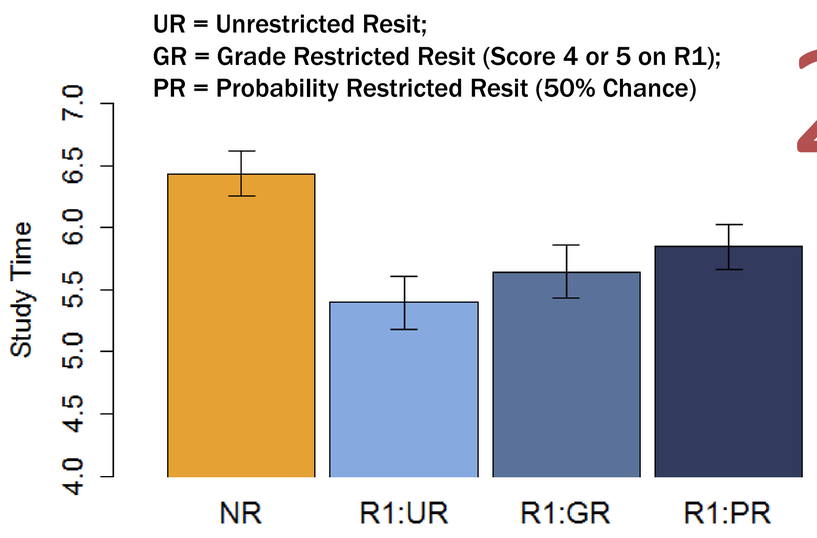


1

Question:
Do resit exams influence behaviour on a first exam?

Answer: Yes
Compared to when only a single exam is available, less time is invested on a first exam when a resit is available.

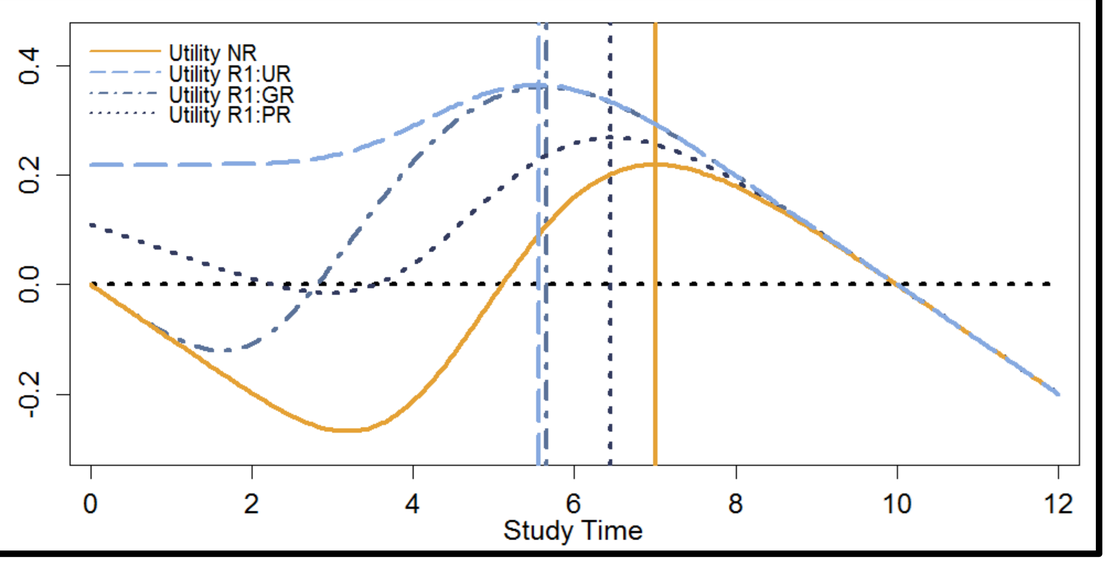


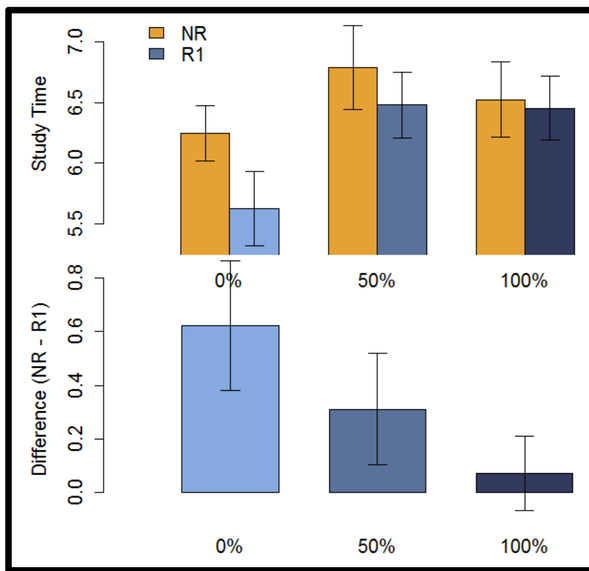


2

Question:
Can the second-chance effect be modulated by restricting access to the resit?

Answer: Yes
The modulating effect is present for both the grade restriction (GR) and the probability restriction (PR), with the latter inducing the biggest modulation.

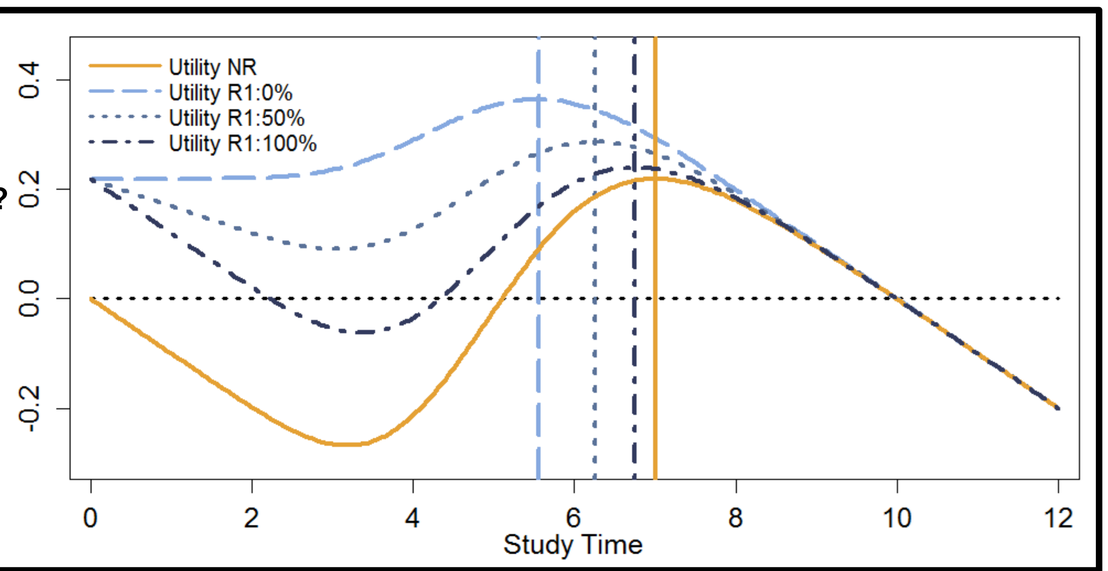


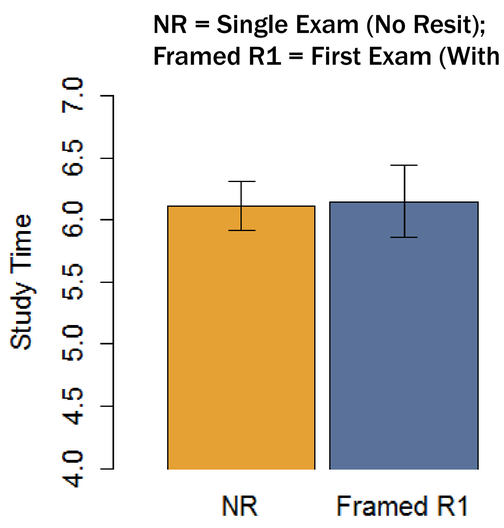


3

Question:
Do different levels of investment depreciation (0%, 50%, or 100%) modulate the second-chance effect?

Answer: Yes
The modulating effect is stronger when the amount of investment depreciation increases (i.e. the difference between NR and R1 becomes smaller).





4

Question:
Is the second-chance effect present when two single exams are presented (i.e. framed by instruction) as a dependent first and resit exam?

Answer: No
The second-chance effect is absent when the prospective resit exam is only framed as such.

bcn

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For the paper on experiments 1 and 2 see: